California GARDEN

JULY-AUGUST 1986
One Dollar
Volume 77 Issue No. 4
ISSN 0008-1116

HORTICULTURE CALENDAR

June 23-29
International Palm Society's Biennial Meeting, Bahia Hotel, San Diego, CA. Daytime garden tours, evening programs, speeches, slide shows. Info: (619) 755-2798.

June 26-28
Annual Convention The American Hosta Society, Hilton Inn-North, 7007 North High St., Columbus, Ohio.

June 27-29
Lompoc Flower Festival Trip sponsored by San Diego Floral Association, includes grand parade, arts and crafts show, Alpha flower show, flower field tour and La Purisima Mission. Info: Jerry Ray (619) 232-2661.

June 27, 28, 29
June Fuschia and Shade Plants and Fuschia Lore on display and for sale at Laguna Hills Mall Shopping Center, El Toro, CA at same hours as shopping center. Educational programs on growing and care of fuchsias.

June 28-29
Ohara Chapter of San Diego Ikebana Show. Casa del Prado, Room 101, Balboa Park, 11-4:30 p.m. Free.

June 28-29
South Bay Bromeliad Associates Presents 19th Annual All Bromeliad Show and Plant Sale at South Coast Botanic Garden, 26399 South Crenshaw Boulevard, Palos Verdes Peninsula, CA. Sat. noon-4:30 p.m.; Sun. 10-4:30 p.m.. Sale 10-4:30 p.m. both days. Rare Plant Auction Sun. 2 p.m. Info: (213) 836-3177.

July 5
Bird Walk and Seminar, Wilderness Gardens Preserve, 45 miles north of San Diego on I-15, then 10 miles east on State Highway 76 to park entrance. Free. Parking fee $1.00. Seminar conducted by Javier Hernandez 8:30-11:00 a.m. Meet at bridge adjacent to parking area at 8:30 a.m.

July 6
San Diego Dahlia Society Specimen Show, Casa del Prado, Room 101, Balboa Park, San Diego. Sun. 1-4:30 p.m. Free.

July 13
Convair Garden Club's 36th Summer Show, Casa del Prado, Room 101, Balboa Park, San Diego, CA. Sun: 1-4:30 p.m. Free.

July 20
Annual Meeting American Gourd Society, Fairgrounds, Mt. Gilead, Ohio. 11:00 a.m., Picnic Dinner.

July 26-27
San Diego County Orchid Summer Show, Casa del Prado, Room 101, Balboa Park, San Diego, CA. Sat. 2-5 p.m.; Sun. 10-4:30 p.m. Free.

August 2-3
San Diego County Dahlia Society's Annual Show. Casa del Prado, Room 101, Balboa Park, San Diego, CA. Sat 2-5 p.m.; Sun. 10-4:30 p.m. Free.

August 13-16
San Diego Fern Society's Eighth Annual Show, Casa del Prado, Room 101, Balboa Park, San Diego, CA. Sat. 1-5 p.m.; Sun. 10-5 p.m. Free.

August 13-16
American Horticultural Society's 41st Annual meeting at San Francisco, CA. Visits to Sunset Magazine Gardens, Golden Gate Park and other gardens. Info: write to: Annual Meeting, AHS, P.O. Box 0105, Mount Vernon, VA 22121, or call (703) 768-5700.

August 23-24
San Diego Gesneriad Society's Tenth Annual Show, Casa del Prado, Room 101, Balboa Park, San Diego, CA. Sat. 12-5 pm.; Sun. 10-5 p.m. Free.

August 30-31
San Diego Turtle and Tortoise Society's 12th Annual Show, Casa del Prado, Room 101, Balboa Park, San Diego, CA. Sat. & Sun. 10-5 p.m. Free.

August 30 - October 11
Early California Reflections Exhibit and Lecture Series in San Juan Capistrano Library, 31495 El Camino Real, San Juan Capistrano, CA. Reservations for lectures and info: call (714) 493-1752. Exhibit hours 10-4 p.m. Tues. through Sun.

August 31
Dedication of the San Diego Sub-Tropical Fruit Garden at the zoo, 11 a.m.-3 p.m. Educational booth with maps and list of plants in garden will be on display in canyon below the garden, across from the Canyon Cafe. Public is invited.

September 3-4
Southwestern Judges' Council's Design and Horticultural Symposium. Casa del Prado, Rm. 101, Balboa Park, San Diego, CA. Sessions cover table settings, strelitizias and bromeliads plus techniques for judging proteas. Everyone is welcome. For info: Jo Ann Gould (619) 232-5762.

September 4-7
American Begonia Society's 54th Annual Convention and Begonia Show at the Hanalei Hotel in San Diego, CA. Registration: Michael Ludwig, 642 Torrance St., San Diego, CA 92103.

September 6-7
San Diego Association of Professional Horticulturists' Third Annual Show, Casa del Prado, Room 101, Balboa Park, San Diego, CA. Sat: 10-5 p.m.; Sun. 10-4:30 p.m. Free.

September 20-21
San Deigo Bromeliad Show, Casa del Prado, Room 101, Balboa Park, San Diego, CA. Sat. 1-4:30 p.m.; Sun. 11-4:30 p.m. Free.

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San Diego Floral Association
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Manuscripts are invited. Deadline is 90-days prior to publication date. All manuscripts and illustrations submitted will be handled carefully but we cannot assume responsibility for their safety. All submissions must be double spaced and accompanied by return postage, if you expect them to be returned to you. Hortus Third is the authority for all botanical names used in this magazine. All opinions expressed are those of the authors and do not necessarily reflect the views of the editors of the San Diego Floral Association.

Address all editorial material to:

®CALIFORNIA GARDEN
Casa del Prado, Balboa Park
San Diego, CA 92101-1619

Postmaster, Send Form 3579 to:
California Garden, Casa Del Prado
San Diego, CA 92101-1619

California SINCE 1909
GARDEN
LIBRARY OF CONGRESS NO. ISSN 0008-1116

San Diego Floral Association &
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FRONT COVER ILLUSTRATION BY IRINA GRONBORG

Illustrations on page 112 and 113 by Irina Gronborg

Irina Gronborg is an artist who lives in Solana Beach where whe has created an exotic garden. Her botanical drawings may be seen each month in San Diego HOME/GARDEN Magazine. She teaches drawing at Grossmont College.

For ten dollars a year, a **garden club** may become an affiliate member of San Diego Floral Association. This entitles the club to a year's subscription to California Garden, to be listed as an affiliate member in each issue of the magazine, showing name of president, phone number, address, place of meeting and time of meeting. It also provides one free ad per year, space permitting, in the magazine. Affiliate members are responsible to keep us informed of any changes in their listing.

For only $25.00 a year, a **professional business** relating to horticulture can become a member of San Diego Floral Association and be listed in each issue of California Garden magazine as a "Professional Affiliate". This listing would include name, address and telephone number of the business. It is a wonderful opportunity to reach gardeners.

The deadline for articles and events for September/October issue is July 21, 1986.

We can no longer provide a replacement copy free of charge if you fail to notify us of a new address at least 60 days in advance.

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® CALIFORNIA GARDEN (ISSN) 0008-116) (USPS 084-020), a non-profit publication, is published bi-monthly for $5.00 per year, or $9.00 for two years, by San Diego Floral Association, Inc., Casa del Prado, Balboa Park, San Diego, CA 92101-1619, USA. Single copy is $1.00. For foreign countries add $1.00 for extra postage. Entered as second-class matter, December 8, 1910 at the Post Office in San Diego, California, under the Act of March 3, 1879. Second class postage paid at San Diego.

SAN DIEGO FLORAL ASSOCIATION & GARDEN CENTER

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PHOTOS BY BILL GUNTHER

The front end of the "old" BAHIA BELLE is shown at its pier beside the Bahia Resort Hotel. A new BAHIA BELLE, twice the size of the old, now is under construction. On the opening night of the 1986 Biennial Meeting of The International Palm Society, one or another of these sternwheelers will take palm delegates for a tour, hosted by Bill Evans and the Bahia Resort Hotel, to admire the palm groves which surround San Diego's Mission Bay — which is the world's largest aquatic park.

This huge **Jubaea chilensis** palm has just been planted at the Bahia Resort Hotel, on Mission Bay. It was moved from east San Diego with help of huge cranes and a giant truck. Also new to the grounds of the Bahia is the relatively tiny (in relationship to the Jubaea) but relatively large (in relationship to others of the species) **Phoenix roebelenii,** growing adjacent and immediately in front of the Jubaea.

A Palm Convention in San Diego

By Bill Gunther

During recent months there has been a regular parade of palms - from all parts of the County - all of them heading toward Mission Bay, and toward the grounds of the Bahia Resort Hotel.

Big palms. Two gigantic specimens of **Jubaea chilensis** - the biggest palm species on earth, coming in on giant truck trailers from east San Diego. Several big clustering specimens of **Phoenix reclinata,** from who knows where. About two dozen rare **Ravenea rivularis,** growing in huge boxes, from Olivenhain. A spiny-trunked **Trithrinax acanthocoma,** dug up and moved from Del Mar. All this, and more, at a cost of many thousands of dollars.

And just what is the big occasion?

The big occasion is the Biennial Meeting of The International Palm Society, an event which will attract the leading palm experts and hobbyists from around the world to the Bahia from June 23 to 29, 1986.

Bill Evans, the Manager of the Bahia, happens to be a palm enthusiast, and a member of The International Palm Society, and when the Society chose the Bahia as the Headquarters Hotel for its big meeting, he responded by converting the already palm-studded hotel grounds into a veritable full-grown palm arboretum.

The palm genus **Ravenea**, from Madagascar, is so rare in cultivation that only one of the dozen standard palm references even mentions it. Yet this photo shows seven of the some two dozen **Ravenea** palms newly acquired by the Bahia Resort Hotel and planted on its grounds. And what is their species? Nobody now knows! The palm experts who attend the coming Biennial Meeting at the Bahia will meet on this question, and try to decide the answer.

But it is not all just for the palm convention. The addition of many new palms has notably enhanced the tropical appearance of the hotel to the degree that guests who do not know one palm from another sense the improvement; they stay longer and return again and the hotel has prospered to the extent that the size of the spectacular seal pond in front has been doubled, and the boat piers have been rebuilt and expanded, and a new and much bigger sternwheeler "Bahia Belle" soon will arrive to triple the hotel's ability to entertain its guests by boat trips around the very palmy Mission Bay. If the Bahia were located in Alaska instead of in semi-tropical San Diego, this effect would be called "snowballing".

Resort hotels like the Bahia ordinarily cater to out-of-town tourists rather than to citizens of the local community. But during the Biennial Meeting of The International Palm Society, the Bahia Resort Hotel extends a very special invitation to local citizens - particularly plant enthusiasts such as are the readers of CALIFORNIA GARDEN magazine - to visit and see and enjoy and appreciate all the recent improvements.

Very specifically, any citizen of the local community, whether or not a member of The International Palm Society, is invited, without charge, to appear outside the main lobby of the Bahia Resort Hotel at 5 p.m. on June 23, to there join delegates of the International Palm Society in a conducted tour of the Palms of the Bahia, coordinated by Bill Evans, and led by various experts of the Society.

And any citizen, whether or not a member of the Society, for an admission fee of $2 per evening, may attend lectures and presentations by the world's authorities on palms, to be held in the Del Mar Room of the Bahia at 7 p.m. on the evenings of June 24, 25, and 27. For details on speakers and topics, call the Bahia at 488-0551 after June 1.

And any citizen, whether or not a member of the Society, may participate fully in all activities of the convention at exactly the same prepaid rate as is charged to members. For a complete schedule of events and charges, send a stamped pre-addressed large-sized mailing envelope to Jim Wright, Registrar, 2151 Burgener Boulevard, San Diego, CA 92110.

San Diego County, for being located in the extreme southwest corner of continental USA, can grow - outdoors - more palm species than can any other area of the continental USA with the sole exception of south Florida. That is precisely why San Diego was selected for this Palm Convention. And that is precisely why local citizens should utilize very outstanding facilities of this Convention to enhance their knowledge of palms. The Bahia Resort Hotel and The International Palm Society join in inviting you to participate as fully as your personal schedule permits in the very deliberately discounted events of The Biennial Palm Meeting, June 23 to 29, 1986, centered at the Bahia Resort Hotel, 998 West Mission Bay Drive, San Diego, CA 92109.

The Guadalupe Palm

By Bill Gunther

Only 250 miles southeast of San Diego, the Pacific Ocean is an amazing 12,000 feet deep. And 7 million years ago there erupted from that depth a volcano with force sufficient to build up a cone of lava 22 miles long and over 5,000 feet above sea level. Now inactive and eroded, that volcanic Isle, far off the tourist route, is Guadalupe Island, Mexico's westernmost possession.

Thousands of years before the coming of man to the new world, a palm seed from the mainland somehow reached Guadalupe Island, sprouted on the decomposing lava rock, and grew. Eventually, its progenies managed to get to the more hospitable conditions on the higher altitudes, where they gradually evolved into the beautiful and adaptable palm species which eventually covered the moist windward portion of the Island. When man came in clipper ships to discover the Island, and its palms, the Island was named Guadalupe, and its palms were called the Guadalupe Palm. Later, the palm was taxonomically described as **Brahea edulis;** the generic name "Brahea" honors a Tycho Brahe, a Danish astronomer who died in 1601; the specific name "edulis", meaning edible, refers to the edible black husk of the surprisingly large seeds of this palm.

But when man came in his clipper ships, he also brought goats, and some of them either were released on, or escaped to, the Island. There they multiplied prodigiously, right up to the level of the Island's maximum ability to support them with food. Included in their food was every seed of the Guadalupe Palm which fell and was within their reach, and every seedling Guadalupe Palm which sprouted from a seed which ended up in a crevice beyond their reach. As a result, the youngest Guadalupe Palm on Guadalupe Island now is about 150 years old, and all the Guadalupe Palms in their native habitat are dying of old age. But the goats still thrive.

Although the Guadalupe Palm seems destined for early extinction on its only native habitat, it thrives in cultivation in the gardens of San Diego. Guadalupe Island and San Diego are but 250 miles apart, and they have very similar climatic characteristics; thus when planted here, the Guadalupe Palm feels right at home, and flourishes beautifully.

In San Diego, the young palm will grow slowly into a beautiful tree, 35 feet in height, with an unbranched elephant-like trunk 18 inches in diameter at its base. The leafstalks are decorated at the base with cream-colored fuzz, and are usually margined with dull spines. These spines are residual from the palm's mainland origin; they are not an insular development, because no large herb-chomping herbivores - before goats - have ever lived on Guadalupe Island.

Admidst a cluttered setting of eucalyptus trees and ivy, the patterned contrast between sunlight and shadow on the pleated leaves of a Guadalupe palm are strikingly emphasized. This organized play between light and dark is one of the things which makes palms attractive. PHOTO BY BILL GUNTHER

The 4 to 5 foot leafstalk, or petiole, terminates with a slightly costapalmate green leafblade, about six feet in diameter, made up of about 80 pleated segments. This palm is "self-cleaning"; the leaf remnants drop off after they die.

The bloomstalks, like the leaves, grow from the tip of the trunk, but are shorter than the leaves. The blossoms are bisexual, and from them develop huge clusters of round green fruit which, when mature, turn black, are almost an inch in diameter, and which have a sweet edible pulpy covering.

Seeds of the Guadalupe Palm sprout readily within two to six months after planting. Seedlings will tolerate diverse conditions - from full sun to full shade, subsoil to topsoil, alkaline to neutral in acidity, from the desert to the seashore - but seeds, seedlings, and mature plants require good drainage and temperatures above 20 degrees Fahrenheit.

Because local nurseries stock neither seeds nor seedlings of this palm, the International Palm Society is providing, free of charge, a supply of seeds for distribution by the CALIFORNIA GARDEN magazine. These seeds are too large for mailing, so you must pick them up at the office, in the exteme west end of the first floor of the Casa del Prado, in Balboa Park, San Diego. Phone (619) 232-5762 anytime from 10 a.m. to 3 p.m., Monday thru Friday, to be sure that eight seeds will be available for you when you arrive for them. Thank you for helping to preserve a very beautiful palm from extinction!

SANSEVIERIAS

By Dorothy Dunn

Despite the recent burgeoning popularity of this genus, very little information on **Sansevierias** is to be found in the available literature. The generic name, established in 1774, was derived from Raimonde di Sangro, Prince of San Sevre (or Sanseviero), who was an Italian scholar. There are several common names in use, ranging from "Rhino Grass" to "Bowstring Hemp" to "Snake Plant" to "Mother-in-Law's Tongue".

The genus was originally placed in the family **Haemadoraceae** (which includes the Australian genus **Anigozanthos,** or "Kangaroo-Paws"), and more recently has been attributed to both **Liliaceae** and **Agavaceae,** depending on which authority you consult. Adding to the confusion, anywhere from 50 to 160 species have been described at one time or another. **Sansevierias** are native primarily to tropical Africa and its adjacent islands, with a few species occurring in Arabia, Ceylon, India, and Burma.

The plants are usually rosulate or fan-shaped, ranging in size from a few inches to several feet tall. The fleshy, leathery leaves may be flat, furrowed, channelled or grooved, or perfectly cylindrical; most enthusiasts consider the cylindrical-leaved species to be the most intriguing. A plant may have 30 or more leaves at maturity, or only one. They grow from creeping, usually underground rhizomes and will, if planted in the ground, eventually form clusters several feet in diameter. A few species are epiphytic. **Sansevierias** have the disconcerting habit of going through several different growth forms during their lengthy life cycles, so "what you see" (when you order from a catalog) may not necessarily be "what you get" as far as shape is concerned. The flowers appear on long stems, either branched or single, and are usually white, lavender, or greenish in color. They are often quite fragrant. The fruit is a yellow or orange berry which contains one to three seeds.

In habitat **Sansevierias** generally grow in the shade of larger bushes or trees, where they form large, dense colonies, and, in turn, some species of **Ceropegia** and **Caralluma** find shelter under the fan-like masses of **Sansevieria** leaves. In cultivation they adapt readily to heavy shade or filtered sun. They prefer a rich, well-drained soil and a shaded warm location with a minimum temperature of about 50 degrees in winter, as they are rather frost-tender. They do not seem to like high humidity or stagnant moisture or air. They appear to flourish in the dry atmosphere of a centrally-heated house and its indirect light situations, so make excellent house plants. They do not seem to mind being pot-bound, and will often bloom the better for it. Propagation is from

PHOTO BY WILBUR H. GLOVER

seed, division of the clumps, or from leaves. However, in the case of variegated cultivars such as **Sansevieria 'Golden Hahnii',** plants grown from leaves will revert to the original plain green.

Sansevierias are slow-growing, tough, and highly fibrous, and it is easy to understand why some authorities place them in **Agavaceae.** In usage, they rival the New World **Agaves** in providing material for thread, mats, and rope (hence the common name "Bowstring Hemp"). It is said that no stronger rope was ever made by industrial enterprise. The medicinal usages of Sansevierias are reminiscent of the **Euphorbias;** African natives used them for ear-ache and tooth-ache remedies, and some species were also used in the treatment of abdominal pains, diarrhea, hemorrhoids, worms, and miscarriages. However, the flowers, with their recurved petals and extruded pistils and stamens, are reminiscent of some of the cultivated garden lilies, so it is also not difficult to follow the reasoning of those who classify them as **Liliaceae.** However, until someone competent comes along and presents us with a factual, up-to-date, in-depth study of the genus, we are free to enjoy **Sansevierias** for what they basically are — yet another of Nature's bizarre and beautiful manifestations.

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SAN DIEGO ZOOLOGICAL GARDENS
AND
THE CALIFORNIA RARE FRUIT GROWERS

Take pleasure in announcing
the establishment of the

San Diego Sub-Tropical Fruit Garden

By Peggy Winter

(See back cover of this issue for map)

On Sunday, August 31, the Zoo will dedicate its new Sub-Tropical Fruit Garden. From 11 to 3 p.m., members of the California Rare Fruit Growers will staff an educational booth at the foot of the garden across from the Canyon Cafe. The public is invited.

Located on a canyon hillside below the end of Elephant Mesa and above the Canyon Cafe, the San Diego Sub-Tropical Fruit Garden will demonstrate the incredible variety of fruit trees which will grow in San Diego's balmy climate. Mangoes, litchi, mamey, black and white sapotes along with 25 varieties of bananas and many rarer fruits like Jaboticabas and jack fruit; all of these and many more will be found along the garden's meandering path.

The path is unique, too. Although the hillside is fairly steep in places, the path zig-zags back and forth so gradually that it will be the only approved wheelchair exit from the lower part of the zoo.

The garden and the path will not be opened to the general public for several years. Funds must be found to pave the path and provide handrails and benches. In the meantime, the trees are being planted as fast as the club members can find plants, and they have donated and constructed an automated irrigation system so that the health and vigor of the trees will be assured. Hopefully, many of the trees will be fruiting by the time the garden is opened.

Besides showing San Diegans and other visitors fruits that will grow here, the garden will also be used to furnish browse and fruit for the animals. Banana and mango leaves are highly prized as browse. The zoo has provided banana leaves for its animals for some time, but until now, mango leaves have not been available in quantities for browse. The two and a half acres being developed into a Sub-Tropical Fruit Garden will be augmented by several acres of bananas on one side and a mango growing area on the other.

The first plantings were begun over two years ago. Although it is far from a mature garden, there are now many trees that are of great interest to fruit growers.

ORCHIDS

Some Special Problems With Phalaenopsis Culture and How to Solve Them

By Bob Gordon

GENERAL CULTURAL REQUIREMENTS:

Light. Fall, 1500 footcandles (15% of full sunlight) and 1000 footcandles (10%) the remainder. Phals need direct, but filtered sunlight. Reflected light will not do.

Heat. 60 to 85° throughout the year except 3 weeks in early fall (northern hemisphere) when nighttime temps should be lowered to 55°.

Water. Do not allow pots to dry out. Keep medium moist, no matter what your cattleya-growing friends say.

Medium. Use quarter to half-inch bark. Avoid large, hard barks that are slow to absorb water. Seedling bark mix is satisfactory for plants up to blooming size. Four-inch pots should have at least one square inch of drainage holes. Six-inch should have at least two square inches of drainage holes.

Air circulation. In a greenhouse, provide gentle air movement constantly; increase velocity on hot days and cold nights. In the house no additional air circulation is needed.

CULTURAL PROBLEMS:

Pseudomonas. Pseudomonas cattleyae is a water-borne, bacterial infection that kills phalaenopsis leaf tissue and, if it occurs in the crown, crown rot, can kill the plant.

Leaves found to have the dark, wet-appearing patches should be cut off with a sterile tool. If the infection occurs in the crown, cross-hatch upper and lower surfaces of the infected tissue with a sharp, sterile tool and treat with Physan or Kocide 101. Do not allow water to be left standing on leaves at sundown. Spray with Physan and increase temperature and circulation to dry surfaces if wetness is unavoidable.

Prevention: Spray monthly during the winter with a solution of Kocide 101, a copper hydroxide compound with a metallic copper equivalence of 50%. One half to one tblsp. per gallon of water. Do not acidify water used to mix solution.

Pests Identify which and when pests attack your plants. Make recommended treatment **and mark a calendar with the information.** The object is to head them off before they arrive next season and avoid using **all** pesticides **all** the time. Don't be afraid to use the recommended systemics: no evidence has surfaced to date to warrant the fearful reputation the systemic pesticides have had in the past.

PHOTOGRAPH BY BOB GORDON

Pots suitable for phalaenopsis culture: 'Azalea' pot (l) and a modified pot (r). Pot on the right has five extra 3/8" holes made with a soldering iron.

Root rot. Root rot is usually caused by age of the plant, by deteriorated potting medium or by inadequate drainage provisions in the pot itself. Medium should be changed every 18 to 24 months for the commonly-used fir bark, depending on the hardness of the bark when potting. Nut-hard bark is the longest-lasting. Bark which crumbles in a strong pinch can be expected to last less than 24 months given normal watering and fertilizing. (Heavy nitrogen feeding will accelerate the breakdown of fir bark.)

Extra drainage holes as recommended above will extend the life of organic potting media, reduce or eliminate root rot, and eliminate penalties resulting from occasional overwatering.

No flowers. Failure to flower is most often caused by immaturity or poor health of the plant, overly warm nighttime low temperatures during the fall (in the northern hemisphere), or insufficient light, particularly during the fall. (See notes under General Cultural Requirements above.)

Blackening and wilting of the few inches at the end of a new flower spike can be caused by thermal shock from cold water during the winter. The answer is to heat the water to at least 60°F. by adding a small amount of hot water to the stream used to water or fertilize plants. A reamed-out, syphon-type fertilizer injector is useful for this purpose.

CONCLUSION:

Phalaenopsis orchids do not deserve the reputation they have gotten in recent years as being difficult to grow and to flower. They **do** have special needs, some of which are itemized above. Given these considerations, phalaenopsis orchids are as easy to flower as the most abuse-tolerant ones. Who among us does not have his or her eccentricities? Aren't you ashamed of yourself for not loving phals?

From **Culture of the Phalaenopsis Orchid** by Bob Gordon. Laid-Back Publications, 276 East Shamrock, Rialto, CA 92376.

HOW TO GROW HOUSEPLANTS FROM SEED

Reprinted by permission of Builder's Emporium
from **Shop Talk from Pop Larsen**

Want to save money and have the pleasure of raising your own house plants? There is no reason you can't.

You can start now and have flourishing houseplants within months, indoors or outdoors. Geraniums may start blooming in three to four months, African violets in six.

Geraniums started from seed in early spring make good plants. Seeds for geraniums (and impatiens) germinate easily in two to three weeks at 70° temperatures. They are ready to bloom in about three months and the seedlings will be about five to six inches high. Keep these seedlings about 12 inches back from the window pane or place in direct sunlight behind a sheer curtain. Hot sun will burn seedlings. When these plants are matured, they will do well in temperatures ranging between 55° nights, 79° days. Geraniums do best if it is cool at night. Mist impatiens often in winter and watch out for white flies. Both plants need lots of sun in winter.

When planting seeds, use an all-purpose potting soil mixed with perlite or vermiculite.

To make an inexpensive flat for starting seeds, slit a one or two quart milk carton lengthwise. Punch small holes in the bottom for drainage about every four inches.

Fill the carton with two to three inches of potting soil and add 1/8" layer of perlite or vermiculite. Wet this mixture thoroughly and let drain. Take six to eight-inch sticks and put one at each end of the container.

Scatter the seed evenly over the surface of the soil. Do not water. Make a "tent" out of clear plastic supported with sticks. This will help speed up the germination.

Set the carton in an east or south window. Keep the temperature at a constant 70 and keep at least 10" away from the window pane during the day.

You can, if you wish, use fluorescent grow-lights to germinate most seedlings. Keep these lights about 10 to 12 inches above the carton for 14 to 16 hours daily.

Don't overwater and use luke-warm water when watering. Keep the soil moist, not wet.

Seedlings usually pop into life in about two to six weeks. Then two primitive leaves and two true leaves will appear. This means it's time to transplant.

Very carefully lift out the seedlings by inserting something like a kitchen knife under one or more seedlings. Make pencil-tip size holes in a 3-inch pot or flat that has potting soil in it. Press each root into these holes. Leave three inches between seedlings if you are transplanting seedlings to flats. Press soil around the roots firmly enough so when seedlings are pulled they will resist a slight tug. Mist seedlings at this point. Leave plastic "tent" off and put plants back to the light they were growing in. The first seven to ten days are the hardest time for the seedlings. They must have the exact conditions they had before: light, moisture and temperature.

Turn the container occasionally the first seven to ten days so they will grow straight as they tend to grow toward a light source. In the mornings if they look wilted, mist them. When two new leaves start to open, move to a stronger light.

Check the label on the potting soil you have used. If it doesn't state it has fertilizer (food) and if your seedlings don't look healthly apply a half-strength water-soluble all purpose fertilizer for foliage plants. Flowering plants would take a blooming plant food.

Just about all plants that grow vertically and start with a single stem must be pinched when they are two or three inches tall. This is to force branching. Branching increases the surface on which leaves and flowers can appear.

Pinching should be done anytime the stalk grows above and beyond the stems and foliage.

Transfer seedlings to four inch pots in three or four months. By this time the three inch area they were planted in will be too small. At this time put your plants on a regular feeding program.

Let's Put On A GARDEN WORKSHOP

By Patrick Shields

When two or more gardeners get together to talk, plant, or improve gardening methods and techniques by using their hands, it's a workshop. This physical "hands on" activity is fun, informative, and sharpens your skills. No matter if you have been gardening for 50 years, or have yet to harvest your first radish, you will profit. Everyone will benefit; there are no workshop 'losers'. The expert will have the satisfaction of imparting his knowledge to others; the beginner will enrich his know-how.

So, if workshops are so great, why doesn't your garden club or plant society have them? Why don't nurseries and garden centers sponsor or stage workshops? They certainly would benefit with bringing in new members or customers. And they certainly improve member's quality and quantity of plants.

Perhaps workshops seem like too big an undertaking, too expensive, too complicated, take too much time, or perhaps not have the people to stage them, but if you will read this article and follow the guidelines I list, you will find these objections untrue. The suggestions below are the result of lessons learned after staging 30 monthly workshops in the Vista Garden Club.

Start with forming a panel or workshop committee of two to four members. Recruiting by the club's president should be very selective. Choose one experienced gardener and one beginner, the others for their interest and curiosity. The beginner will keep the subjects basic and clear. The expert will offer knowledge to a wide variety of topics. Other members of the committee may have organizing skills, drawing abilities, teaching or speaking talents. But these talents are frequently hidden. Members will discover and develop interests they never suspected; that's why I consider membership of a workshop committee an outstanding opportunity to learn and improve.

The chairman can be appointed, elected by the committee members, or better yet; volunteer. The chairman's main purpose is to keep the committee moving and motivated. "If you buy a lemon, make lemonade," is a good optimistic attitude for all chairmen. Sure, things go wrong; expect them to, at the most inopportune time, but review the happening a week later and laugh. Like the time my tank sprayer became plugged during a demonstration on dormant sprays, or once when the electric chain saw wouldn't start.

Establish a specific time and place for both committee meetings and workshops. Our committee meets on the Monday before the regular club meeting and the workshop takes place the following Monday. This provides us with the opportunity to publicize the workshop at our club's regular meeting and pass around a sign up sheet, but more about that later. This steadfast policy will result in better attendance at committee meetings and workshops.

Recently our committee meeting was changed to another Monday, but I forgot. I prepared a real scrumptious refreshment surprise for the committee. I made four of them 15 minutes before they were to arrive, and no one showed up. The meeting was to take place the following Monday! I was left with four beautifully constructed banana splits, complete with walnuts and cherries. As I sat at the meeting table an hour later eating the second one, I laughed and reviewed what I had learned; be sure to notify your fellow committee members of all meetings, don't eat more than one banana split per day, and don't put the cherries on top until just before serving because they sink out-of-sight as the whipped cream shrinks.

Plan the year's program well in advance of the first workshop. This is the easiest stunt to do by any committee. Gardening is so diverse, so varied, consisting of so much, that there lies a danger of trying to accomplish too much at one workshop or in one year's program. Ideas from the committee's members will be numerous. We pass a clipboard around to the club members each spring, and they write down suggestions. If they see their subject already written down, they pencil in a check after it, but don't limit the club members to only one choice. This will tell the committee what subjects the club is interested in, what they would like to learn, or where they need help.

After the program is discussed, planned, and printed by the committee, submit it to the president and the board for approval. They will not only O.K. it, but they will return it with many good suggestions, and even offer their assistance and tools assuring workshop success. Be sure twenty or thirty copies of this program are run off for distribution to members, officers, committeemen, etc., because the more people that see it, the easier your mission will be accomplished. Copies of our programs have turned up in magazines, newspapers, other garden clubs, and even in various district committees.

Good programs, like gardening, boil down to planting the right seed at the proper time. We plant corn in February and onions in December, so workshops for those vegetables are good workshop topics for Vista, but certainly not for a garden club in say, Quincy or McCloud. So fit your workshop programs to your environment.

Committee meetings are held at my home one week before the workshop to discuss assignments, equipment, and roughly sketch out how much time to spend on each lecture, demonstration, and application. A typed agenda is given to each person. It saves a lot of time and gives them time to look over the items. This provides all committeemen the opportunity to take a very active part in both this meeting and the workshop. The agenda covers plans for not only this month's workshop, but also the next one, and the one after. Thus by covering three workshops at each committee meeting, details are smoothly worked out. We also discuss and make suggestions to improve the last workshop if we will ever do it again. I like to provide coffee, tea, or even apple cider plus some refreshments. This establishes an informal mood to our meetings. I try to surprise them with something different each meeting and have served everything from candied popcorn to bundt cake. Members have offered to bring refreshments and I have told them that when I run out of ideas and have to repeat a certain treat, they can, (and all of them are better cooks than I), but I don't want them loaded down with bringing cookies. They are loaded down with ideas and inspiration instead.

At the garden club meeting one of the committeemen announces what the workshop's subject will be, where it will be held, what time it starts, and what tools to bring. They then pass around a sign-up sheet mounted on a clipboard with pen attached. Under the sign-up sheet are a dozen or so street maps, so new club members can easily find their way. At the regular club meeting we may present bills to the treasurer and a press release about next month's workshop to both the newsletter editor and the publicity chairman in case she wants to send it to local newspapers.

Our workshops happen on the Monday after the regular club meeting the first Friday of each month. They start at 1:00 p.m. sharp, so we arrive early and set up any tables, dig planting holes, or plug in electrical lines. No refreshments now, it's all action. We follow a lecture, demonstration, application formula. Our motto is "KSMF" a shortened form of keep it simple make it fun.

Lectures or instructions last only ten minutes, demonstrations not longer than fifteen minutes and the application part may last a half-an-hour to forty-five minutes. Cover only one subject such as: planting bare root trees, pruning roses, or planting warm season vegetables. If you try to cover more than one subject, the workshop will be too long. During the application time, we sometimes divide the group into several teams, and each workshop committeeman oversees one team. For instance, in a recent workshop on pruning dormant fruit trees, Mary supervised apple trees, Enge had almonds, I took pear trees, and Bobee did peaches and nectarines. Each team rotated every fifteen minutes.

We also try to give each person a handout on the subect or addresses to where they can obtain free information.

It's hard to rate individual workshop successes by attendance or thank you from club members. We just feel happy and well rewarded. Don't expect large crowds, in fact, hope you don't get more than eight or ten club members at first, not until your committee gains experience and confidence. Remember you will probably learn more than your students when staging workshops.

Appreciation and recognition for club members who give talks, share skills or methods, and host workshops is a must. We present certificates, letters of appreciation, and even plaques at regular club meetings to show our gratitude. One of our most popular awards is a sandcasting that says, "Garden Workshop Award 1986" because it is weather-resistant and most recipients hang it outside in their garden where it was earned.

What of our future plans? Will we ever run out of subjects or ideas? Certainly not. Our workshops the first couple years dealt with gardening basics. We then tackled special plants such as orchids or bonsai. We are now planning "The Grand Tour" where we visit a member's home and observe the beauty of her landscaping, flowers, vegetables, and trees.

The workshop committee will give short talks on the propagation, cultivation, and special problems in growing the varieties of plants viewed.

Perhaps in a couple years we will specialize on short field trips to near-by nurseries or botanical gardens, but we will always return to the basics because there will be new members in the club, new products, new methods, and certainly new ways to preserve a healthy environment and create beauty within it.

Patrick Shields is a Master Gardener from Vista, CA.

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Keeping the Lawn In A-One Condition

Garden News Release
California Association of Nurserymen

A green, well manicured lawn is always a pleasure to see. While this adds to the value of any home, its value to your own well being is frequently overlooked. When the outside of your home looks good, you feel good too.

While the so-called 'perfect' lawn may seem unobtainable or seem to require too much effort on your part, you can relax for it isn't all that bad and much easier than you suspect. First on the list is to not second guess what is wrong with the lawn. If you have a history of problems, cut out a plug about three inches square that includes soil and take it to your local nurseryman. With information you can provide as to the exposure, wear and tear, watering and any product you have used on the lawn, a suitable program can be provided to assure you success.

Basically, most lawns will respond to a few standard steps for you to have that picture perfect look. The use of a good fertilizer is high on the list. Applied evenly all over the lawn, this may give the added oomph it needs. Be sure the soil is damp several inches (3-4) deep and the grass itself is dry before applying. This will prevent burned areas which will happen if the lawn is thirsty or from the fertilizer sticking to the grass. Lightly wash off the grass after feeding and water well so the product will begin its slow release to the plant. A dry fertilizer will take several weeks to show an effect but will last for up to six weeks. On the other hand, a liquid fertilizer is immediately released to the roots but washed past them by heavy watering.

Mowing should not be taken lightly. It is necessary for a healthy lawn. In the winter, most lawns are kept very short but in the summer the height should be raised with hot weather grasses such as Bermuda and St. Augustine mowed for a one inch height and others two inches with cool weather grasses at three inches. When cutting make sure the blades of the mower are sharp as dull blades will not only leave a choppy look but cause browning on the grass tips.

Watering is an important aspect of any yard but proper watering can assist in maintaining the lawn of your choice. The use of short daily waterings may be convenient but for most yards a deep watering once or twice a week, depending upon heat and the type of lawn, can be much more useful. Roots need to be encouraged to go deep and that is achieved by deep watering as well as adequate feeding. Shallow watering causes the root tips to turn to the surface for moisture where they can be easily burned by the heat of a hot day that would dry out the top quarter inch of soil.

A healthy, happy lawn does not need the same amount of weed killers that a weak lawn needs. The thicker the lawn, the more light is denied weed seeds that need the sun in order to grow. If the lawn is plain worn out, then consider putting in a new lawn or if it's just in patches, reseed these areas.

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Soil Improvement

By Gregory and Eleanore Macy

All the fine cultural directions in the world won't help if soil improvement isn't attended to. This is where a good soil test kit comes in handy.

Assume that your soil doesn't have sufficient mineral reserves to keep the vegetables well supplied. To give your vegetables the nutrients they need, increase the level of mineral reserves by adding slow-release minerals such as phosphate, potash and such. Annually add the following to each 1,000 square feet of garden and till it in: gypsum-25 pounds, phosphate-50 pounds, potash-25 pounds. Do this until your soil will grow a very good crop of beans, peas or any root crop without any further addition. After this level of fertility has been achieved, cut the addition of minerals to 1/3 the original level, or make a large addition every three years. If you have difficulty finding these minerals in separate form, ask a knowledgeable nurseryman about combined mineral amendments that are available.

If this is the first year of soil improvement, or if you haven't improved your soil, fertilizer is required. Adding 100 pounds of cottonseed meal, or 50 pounds of fish meal, or 50 pounds of bone and blood meal to each 1,000 square feet of garden will make certain that all vegetables grow fairly well. Do this before planting each crop. However, we do recommend organic soil improvement with minerals rather than dependence on fertilizers, even though they be organic and not chemical.

For high-nitrogen-demanding crops like spinach, celery and the brassicas, side dressings with blood meal and urea (if you aren't strictly organic) are very helpful. The cultural directions will tell you when to side dress. Five to ten pounds of blood meal or three to five pounds of urea will be sufficient for a hundred feet of row or 100 square feet of growing bed. If you want to grow really big, succulent greens, side dressing is almost required.

Moist garden soils which enjoy warm temperatures year-round lose much humus. About a one-inch covering of manure or compost must be added to garden soil each year just to replace the amount lost through decomposition. If you are newly gardening on very sandy or adobe clay soil, an initial addition of three inches of manure will bring about a remarkable change in the soil's structure and workability.

We recommend the use of compost, horse and cow manure for loosening up soil and creating good tilth. Chicken manure is very strong stuff and should be considered a fertilizer which is about 1/3 as strong as cottonseed meal, and used accordingly.

If you build the mineral reserves of your soil with minerals and fertilize until they are built up, and annually replace the humus lost to decomposition, and initially increase the level of humus in clay or sandy soils, and side dress certain demanding crops with nitrogen as needed, you can be assured of a successful garden. And, that's what we want you to have!

Eleanore Macy is President of California Gardeners Seed Company. For a free 1986 catalog, write to: California Gardeners Seed Company, 904 Silver Spur Road, Suite 414, Rolling Hills Estates, CA 90274. Her 1986 catalog contains much useful information, including this article on Soil Improvement.

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1.	Livistona chinensis	China
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3.	Howes forsterana	Lord Howe Island
4.	Roystonea elata	Cuba
5.	Rhopalostylis baurei	Norfolk Island
6.	Rhopalostylis sapida	New Zealand
7.	Rhopalostylis cheesmanii	Raoul Island
8.	Chamaedorea costaricana	Costa Rica
9.	Chamaedorea radicalis	Mexico
10.	Chamaedorea tepejilote	Guatemala
11.	Sabal palmetto	Florida
12.	Sabal dominguensis	Bermuda
13.	Arenga engleri	Taiwan
14.	Caryota mitis	Malaya
15.	Caryota urens	S.E. Asia
16.	Archontophoenix alexandrae	Australia
17.	Trachycarpus fortunei	China
18.	Trachycarpus takil	Himalayas
19.	Serenoa repens	Florida
20.	Phoenix roebelenii	Laos
21.	Mascarena vershafeltii	Mascarenes
22.	Trithrinax acanthocoma	Brazil
23.	Coccothrinax argentata	Florida
24.	Brahea aculeata	Mexico
25.	Coccothrinax dussiana	West Indies
26.	Chrysalidocarpus lutescens	Madagascar
27.	Pritchardia aracense	South Pacific
28.	Pritchardia glabrata	South Pacific
29.	Orbignya cohune	Central America
30.	Paurotis wrightii	Florida
31.	Jubaea chilensis	Chile
32.	Neodypsis decaryi	Madagascar
33.	Sabal minor	Georgia
34.	Copernicia prunifera	Brazil
35.	Phoenix roebelenii x reclinata	(hybrid)
36.	Coccothrinax dussiana	West Indies
37.	Chamaerops humilis	Mediterranean
38.	Phoenix canariensis	Canary Islands
39.	Arecastrum x Butia	(hybrid)
40.	Chrysalidocarpus madagascariensis	Madagascar
41.	Trachycarpus khasianus	Himalayas
42.	Chamaedorea erumpens	Guatemala
43.	Trachycarpus martianus	Himalayas
44.	Livistona australis	Australia
45.	Thrinax parviflora	Florida
46.	Washingtonia robusta	Baja California
47.	Butia capitata	Brazil
48.	Arecastrum romanzoffianum	Brazil
49.	Ravenea rivularis	Madagascar
50.	Chamaedorea "Irving Cantor"	(hybrid)
51.	Howea belmoreana	Lord Howe Island

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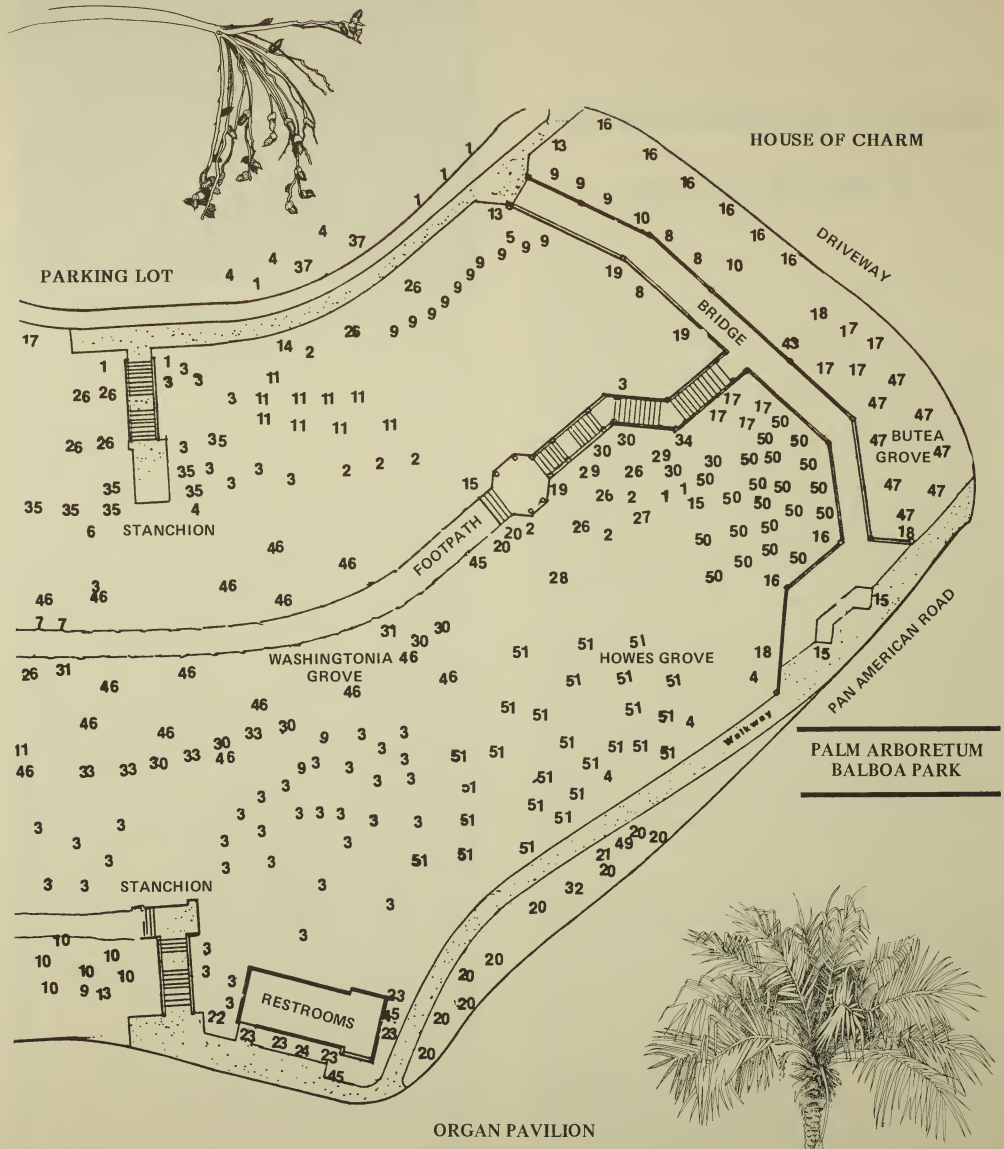
THE PALM CANYON

BALBOA PARK
SAN DIEGO

This updated presentation of The Palm Canyon has been specially prepared for publication by the CALIFORNIA GARDEN magazine by the City of San Diego Park & Recreation Department, by Paul Mahalik, Bill Gunther and artist Irina Gronborg.



HISTORICAL NOTE: There is reason to beleive that the first of the Washingtonia robusta palms in this canyon were planted by Kate Sessions at the turn of this century. Later, many more were planted in 1913, for the 1915—16 Panama California International Exposition. These grew up to the point that for the 1935—36 California Pacific International Exposition, a bridge, with multicolored lights, was built to view them from overhead. These stanchions are what remain from that bridge. Perhaps half of the original Washingtonia palms — now old, tall, and leaning — remain as the backbone for the existing Palm Canyon collection.

WATER GARDENING

A Work of Art

By California Association of Nurserymen

No one can deny that water is one of the most soothing things known to man. The quiet forest glade with a gentle stream, a hot tub surrounded by lush greenery, the rhythmic lapping of a peaceful sea or the sound of a waterfall. All of these describe a way that water in its unique way can ease the pressures of everyday stress.

With the advancement of knowledge, it is possible for you to have your own form of a water garden, be it a fancy stream or pond or as small as a tub positioned on a condominium's patio. Whatever your choice may be, you will find it a work of art and a conversational piece. Those with small spaces to garden in can still have a water garden as any container that can be made water tight and hold four gallons of water can become a "tub" garden. Even that plastic wading pool can be made into a fascinating water garden!

Think of the possibilities if you happen to have a stream or a pond on your property. Why not add to its natural beauty with the addition of a few plants that would add to its beauty. The choice of plants is yours, and there are many to choose from by just visiting a nursery specializing in water garden plants or ordering a catalog to order these plants.

When your water garden is going to be a small container, the use of one spectacular water lily just off center and then a few oxygenating grasses will give you a balanced look. Keeping the water clear is not as much of a problem as one thinks as it's never supposed to be as clear as a swimming pool. If a filter is not possible or feasible, just add some water snails and small fish to do the job.

Water lilies are beauties in their own right. While most will wish for day bloomers, there are even those that bloom at night to brighten the evenings. Besides being a flower that can range from small to dinner plate size, you'll find fragrant ones that enhance any setting. Some of the flowers remain close to the lily pad while others can reach 1 1/2 feet above the water to beckon your attention. Colors sparkle with reds, white, blues, pinks, purples, yellows and combinations in between. Leaves can be dark or light, speckled or variegated and large or small.

Why not give yourself a gift, a restful, soothing, work of art, with a unique water or tub garden this spring?

TIGER CALAMONDIN CITRUS

By Ruby Law

Would you like to have a spectacular ornamental citrus tree which is easy to grow, cold resistant, a prolific bearer with hundreds of fruit at one time, and can be used as a background, shade tree, container or specimen plant to accent a corner, or as a hedge?

Calamondin fruit is a natural hybrid, generally considered a cross between a Kumquat and a sour Mandarin. It is of Chinese origin, grown extensively in the Philippines and known there as calamonding. The Chinese name is Sechi Chief, which means four seasons. This is appropriate since the fruit is produced year-round.

The quantity of fruit makes the tree spectacular in appearance. The fruit is usually 1½ inches in diameter and can hang on the tree for long periods of time without deterioration or spoiling. It is easily peeled when mature, and is juicy, and a good substitute for lemons or limes. It has few seeds. The pulp is tender, acid, and juicy. It makes an excellent marmalade, and when sweetened, is a delicious drink.

Calamondin is popular as a container plant, both indoors and outside, and can be grown in several parts of the country where other citrus cannot be grown. It has a tall, upright, columnar growth habit, but can be pruned to half its size to be dwarf and bushy, to fit in with the landscape. The size and shape can be varied according to local growing conditions.

Most western soils contain ample amounts of all the nutrients required by citrus, except nitrogen. If leaves remain yellow, with dark green veins after nitrogen has been applied, applications of minor nutrients such as iron, zinc and manganese are needed. Nitrogen should be applied three or four times a year, with the first and most important application in January or February. Additonal applications should be made every six to eight weeks until the end of the summer. Nitrogen applied in fall encourages frost-sensitive growth.

Look in your nursery for the Tiger Calamondin, a new hybrid. It is an evergreen plant with bright yellow and green foliage, fragrant flowers, and striped fruit. It will create a lot of yellow in your landscaped garden.

GARDEN with your kids

The National Garden Bureau wants to recognize the valuable children's gardening programs across North America. In addition, they want to donate bumper stickers, "Garden with Your Kids!", to program leaders or directors to give to the children who garden. These programs are usually sponsored by local clubs or community organizations. If you are aware of any youth or children's gardening programs, let them know how to get these bumper stickers.

To receive the bumper stickers, the program director should write a letter to the National Garden Bureau, 628 Executive Drive, Willowbrook, Illinois 60521, briefly explaining the children's gardening program and the number of youth participating. The National Garden Bureau will thank the director for donating the time to guide and instruct the gardeners of tomorrow as well as mail the bumper stickers.

The aim is to encourage children and youth gardening. One of the most memorable experiences a child may have is to sow a seed and watch the miracle of life emerge.

SURINAM CHERRY

By Ruby Law

Native to Brazil, **Eugenia uniflora,** 'Surinam Cherry', also known as pitanga, is greatly enjoyed as a fresh fruit. Its fruit is round, usually one-inch in diameter with eight prominent ribs resembling miniature Japanese lanterns. As the fruit ripens, it changes from green to yellow, to orange, to scarlet. It should be eaten only at the fully ripe stage when the flavor is most distinctive and aromatic.

'Surinam cherry' can reach up to 20 to 25 feet as an evergreen shrub or small glabrous tree. It prunes well and is often trained as a hedge. Its glossy ovate two-inch leaves are quite attractive. They are green tinged with coppery red when young and tender. 'Surinam cherry' is used primarily as an ornamental landscape plant.

'Surinam cherry' can be grown in full sun or partial shade in a container, and is hardy in temperatures down to 28 degrees Fahrenheit. Its attractive foliage, fragrant white flowers, and colorful fruit make it an attractive addition to your patio area.

Ruby Law, from Rancho Cucamonga, California, is an avid gardener, specializing in growing rare fruits. She is seated as Chairlady of the California Rare Fruit Growers Foothill Area meetings held in the Los Angeles County Arboretum in Arcadia.

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WATER EFFECTS

By Bob Fenner

Water! For sights and sounds there is nothing more soothing in landscape than a reflecting pool, pond, waterfall, fountain or stream.

With some searching and planning, all gardens can benefit from an attractive, well-built water effect. In succeeding issues I will offer my help in guiding you through considerations of site selection, design, construction, animal and plant selection, maintenance and repair.

For now, let's go through some of the rationale/justification or philosophy of waterscapes.

Cost:

Even in the labor and materials, high cost of land of southern California, water effects can be desirably cost-effective. On the low-expense end, vinyl liner ponds can be constructed and stocked with attention to "biological balancing" for as little as $2.00 a square foot. Compare this with different types of landscape.

Construction costs for fiberglass in-ground or above-ground, or concrete or shotcrete ponds need not be exhorbitant. With some planning and labor on your part you may find they run around $5.00 per square foot including pump, filter, rockwork, fish and plants. As an investment in your property, water effects retain their value as permanent works of art.

Operations and Maintenance Costs:

These need not be burdensome. If the system is well-designed and built, the pump (if you use one) well-sized and engineered for its job, and a program implemented for minor upkeep, your water feature will be a joy.

What about all the water you will use? There is much less water given up by a body of water than an equivalent size lawn. How often do you water your pool? Water vented for partial changes or cleaning can be used for irrigation.

How much will a pump increase your electrical bill? Basically, as with other appliances, volts times amps equals watts and you pay by the kilowatt hour. With the right set-up, you can keep the costs of running your system in line. Some technologies involve no pump, air-lift systems, low/volume - low/head pumps, two-speed motors and easily installed, low-cost timers.

Maintenance:

Will your system turn into a quagmire? Not at all. As you'll find in ensuing issues, aquatic systems can be made with low and no maintenance time and costs.

Overview:

As the first piece of recorded writing in Linear B Greek is transliterated, "All is Water". There is a water feature well within the economic reach and aesthetic scope of each landscape.

Bob Fenner is a standard in the waterscape field with partnerships in Aquatic Environments, design and construction; Aquatic Life Service, maintenance and service; Wet Pets, retail; Aqua Chem, manufacturing; and Aquaritech, distribution, sales.

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DAHLIAS ARE PURR-FECT

Garden News Release from
California Association of Nurserymen

As one of the more striking, fanciful plants in the yard,the dahlia purrs with perfection.From the dwarf bedding plants to the dinner plate size award winners which tower up to 5 feet, the dahlia's brilliant colors and forms attract immediate attention.

The exhibition plants are grown from tubers and require staking and April is the time to plant. Place the tuber on its side in a hole about six inches deep or if your have a heavy clay soil, plant only 3-4 inches deep. Cover this with only two inches of soil and continue this as the plant grows to fill the hole. Don't forget to put in the stake at the time of planting so you avoid stabbing the tuber at a later date. The smaller plants which are treated as annuals are also planted in April. With the proper care, you can have dahlias in bloom all summer as well as in the fall.

Dahlias like the sun but will tolerate some shade in the hotter areas of the state. Being a heavy bloomer means they are a heavy eater. Frequent light fertilizing will help their performance. Use mulch not only at the time of planting but throughout the growing season.

The dahlia comes in many forms so there will be at least one that will meet your fancy. The colors run from brilliant hues of red, orange, yellow, and purple to the pale pinks, whites, bronzes and almost every combination you can think of. The single flowered ones have open centers and can be as wide as four inches even though they are used as bedding plants. The anemone or pin cushion type dahlia has a tuft of tiny petals in the center ringed by flat petals. The collerette has an open center surrounded with almost a shredded-like set of petals which has larger, flatter petals outside of this. Then, of course, we have the decorative type which can be your dinner plate size or the small bedding plant.

The kinds of dahlias to choose from doesn't end here as you still have the ball and pompom plants which are doubles. Last, but not least, is the cactus family of flowers. These popular plants have fully double petals that are curved almost to the point of being tubular with pointed tips. The color range is vast and the flower size ranges from four inches to a 12 inch dazzler.

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SOME SMALLER
New Zealand Tree Ferns

By Bess Tittle

Alsophila colensoi (formerly **Cyathea colensoi**), Golden tree fern or Mountain tree fern, is either creeping or erect to only five feet. It has soft, yellow-green, narrow fronds abut three to five feet long. It is more common on South Island in shady mountain gullies in the tussock just above the bush-line.

Another slender tree fern is **Cyathea Cunninghamii,** Gully tree fern, akin to Mamaku, but with a trunk only three to four inches thick, growing from about seven to 70 feet tall. Its fronds are paler and softer than Mamaku but do not curve or droop. In old, very tall trees, the trunk may be buttressed by aerial roots in a coarse fibrous mat. Gully tree ferns grow thickly in scrub and second growth areas of high rainfall.

A related tree fern is **Hemitelia Smithii** (formerly **Cyathea Smithii**). This species grows from seven to 28 feet high and may have several crowns of soft, narrow yellow-green fronds, spreading like a plate. The stipes and mid-ribs of old leaf stalks persistently hang below the crown to form a "ragged Maori skirt."

Some botanists include **Blechnum fluviatile,** Kiwikiwi, among tree ferns. Trunks are low and scaly, topped by fronds of olive-green which often touch the ground. Common throughout New Zealand, especially in cooler mountain regions, it prefers damp situations and so may be difficult to grow in southern California. A few fronds of this fern attached to a post were used by Maori priests to ward off evil spirits. Medicinally, it was chewed for sore mouth or tongue.

Blechnum discolor, Key Crown fern, is also an erect rhizome forming a small trunk with a crown of erect fronds. Common in forests throughout New Zealand, they are frequently the dominant ground cover at higher altitudes.

Bess Tittle recently returned from a trip to New Zealand.

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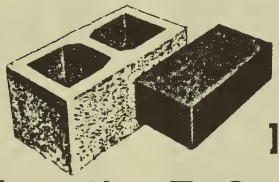

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Growing Sprouts at Home

by Tineke Wilders

First of all, I'd like to wish all the readers not only a prosperous, but also a green and colorful year, which despite the cold and snow can be achieved all year round indoors by growing your own sprouts. Not only will you have something green to look at, but you will be able to add highly nutritious food to your daily diet. How? By sprouting a variety of seeds.

In China, sprouting seeds has been a practice of daily wisdom and still is the essential part of Chinese food, as with the mung bean, or as we call them, beansprouts.

Sprouted seeds, beans and grains are extremely rich in vitamins, minerals and proteins, yet low in calories and carbohydrates. They are delicious and inexpensive, easy and fun to grow.

Many nutritious-conscious restaurants and delis are using sprouts to supplement and decorate their fresh-made sandwiches and salads. You find them ready-grown in the vegetable section of the supermarket. But it is so easy - and economical - to grow them yourself. You don't need a garden and you can grow them all year round indoors.

To begin, find a good source for fresh seeds. Most natural food stores sell a variety of seeds. The easiest seeds to start with are mung beans, alfalfa and lentils.

Besides the seeds, this is what you need:

1. Glass sprouting jars: Jam jars are good for this purpose. Wide-mouth preserving jars in sizes from a quart to a gallon (depending on how much you want to sprout) are ideal.
2. Clean cheesecloth to cover the top and a rubber band to secure it. You can also buy a set of three plastic screw-on lids with different sizes of wire screen. They fit exactly the wide-mouth preserving jars and are made specially for the purpose of sprouting.
3. A fairly warm and dark place (about 20C) somewhere in your kitchen, with good ventilation. I always use a cupboard shelf, but a countertop or kitchen table can be used as well.

PROCEDURE: Sort out the seeds by picking out the broken and damaged ones, since they will not germinate. If you sprout tiny seeds, such as alfalfa, measure one heaping tablespooon, which yields about one quart of sprouted vegetables. For larger seeds, use more than a tablespoon. Always make sure there is plenty of room for the seeds to expand and later for light to reach the leaves. Most seeds expand six to eight times their volume, after four to six days of growing.

Soak the sorted out and washed seeds overnight in warm water (about one part seed to four parts of water).

The next morning, drain off the water through the cheesecloth or the screened lid and save to water your plants to add extra nutrients. Then rinse the seeds under warm running water and drain off the excessive water. Place the jar at a 45 degree angle in a plate, dish or bowl in your selected warm, dark spot. Now the sprouting process will begin.

Fruit jars and moisture will provide perfect sprouts.

One more essential thing: the seeds have to be rinsed with tepid water at least three times a day, otherwise they will spoil. They should always be kept moist, never completely dry and never too wet.

Place in sunlight

In three to four days, alfalfa sprouts will have developed two yellow leaves (seed leaves or cotyledon) and curly roots. Now the jar can be placed in sunlight, so that the leaves can turn green, a process which will take half a day. When all the leaves are green, the sprouts are at their optimum nutritional value and should be eaten fresh in soup, salad or sandwiches.

Sprouted seeds can be kept in the fridge for a couple of days, but they do taste best when eaten the first day. If you sprout in small batches, you will always have a fresh supply for daily use.

Other seeds that can be experimented with, until you discover your own favorites are: soybeans (they should not be older than one year, otherwise they may not germinate), sunflower, wheat, rice, raddish, garbanzo, cabbage, black-eyed peas, corn, adzuki beans and even peanuts.

Try for yourself and enjoy!

Tineke Wilders, from El Cajon, California, a native from Holland, is a TV/radio/media personality, specializing in tropical and sub-tropical plants. She currently writes for the San Diego Union newspaper.

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Book Reviews

By Mary Lou Orphey

THE HAPPY GARDEN by Jamie Potter and Janet Powers. Illustrated by D.J. Potter. 1985 Gopher Graphics, RD#2 Box 323, Greene, N.Y. 13778. 8½ x 11 in. paperback 51 pages $6.95 postpaid.

Children love to read books with bright colored pictures and large print. While improving their reading skills, they will learn about a day in the life of a vegetable garden. THE HAPPY GARDEN is such a busy place - complete with plants, birds, insects and people. It is a delightful reading experience for children.

The authors present the garden as a fictional place that makes people happy. The book teaches simple ecological lessons and encourages thoughtful observation.

Many adults find pleasure in gardening. THE HAPPY GARDENER may help mold the gardeners of the future.

SEA VEGETABLES, Harvesting Guide & Cookbook by Evelyn McConnaughey 1985 Nauturegraph Publishers, Inc. P.O. Box 1075, Happy Camp, CA 96039 5½ x 8½ in. paperback 237 pages $7.95.

This guide to harvesting seaweed is a fascinating glimpse into a different form of gardening. Nature plants, fertilizes and maintains; the gardener reaps.

There is a wealth of background information on seaweed classifications, names, structures and where seaweeds grow. There are tips for the forager -- which seaweeds can be used, how to use and preserve them. Over a hundred recipes for using seaweed are included. Examples are: Seaweed Quiche, Kelp Lentil Soup and Guess Again Salad. There are chapters on seaweed for fertilizer, seaweed as animal fodder and seaweed for use in the medicine chest.

There are good and bad aspects to using sea vegetables. They are a free source of food. Seaweed has a high mineral content, particularly iron, iodine and calcium. On the other hand, one must be concerned about safety. Certain seaweeds are sensitive to industrial wastes and others have a high ability to accumulate radio-active substances.

SEA VEGETABLES opens up new horizons. When looking at the vast expanse of ocean or stepping over seaweed washed up on the sand, one might wish they knew more about sea vegetables. This informative book will answer many questions and also raise a few.

A GARDENER TOUCHED WITH GENIUS, The Life of Luther Burbank by Peter Dreyer. Revised Edition 1985 University of California Press Berkeley, CA 94720. 6 x 9 in. paperback 293 pages $10.95.

Throughout time, mankind has been blessed with people touched with creative genius. Like Ford and Edison, Burbank was such a man. Experimentation was "the sole object and purpose" of his life. His two most important contributions were the Russet Burbank ("Idaho") potato and varieties of the plum: Beauty, Formosa, Santa Rosa, Burbank, Duarte, Wickson, Gaviota, Giant, Ace, Late Santa Rosa, and Late Duarte. He is also noted for breeding the Shasta daisy. A letter written by Burbank before his death in 1926 was the key to passage of the first Plant Patent Law in 1930.

The biography of Luther Burbank is guaranteed to be of interest to gardeners and botanists. It is interesting to analyze the scientific community's attitude toward Burbank; their disillusionment with his lack of scientific background and record-keeping, their disappointment that his success was based on an innate ability to breed rather than on scientific premise, their disdain of his popularity and envy of his success. However, Luther Burbank's influence on California's agriculture remains unequalled. This pensive biography was extensively researched, well-written, and is worthy of high praise.

FLOWERING PLANTS, The Santa Monica Mountains, Coastal & Chaparral Regions of Southern California by Nancy Dale. Photographs by members of the California Native Plant Society. 1986 Capra Press, P.O. Box 2068, Santa Barbara, CA 93120 5½ x 8½ in. paperback 240 pages $15.95.

The Santa Monica Mountains are ten miles across at the widest point and fifty miles long running from Griffith Park to Point Mugu. Many of the flowering plants in this area also grow in San Diego County. The book is an ideal companion for hikers, campers and botanists.

For each flower described, a color picture or botanical drawing is included as well as the common English name, the scientific name of the family, flowering time and unusual habitat, interesting information, and what the scientific name means. More than two hundred forty of the most commonly encountered species are described in detail. Other species are also described in the text. There is a chapter on native trees of the Santa Monica Mountains.

For your information, "The California Native Plant Society is an organization of laymen and professionals united by an interest in the plants of California. It is open to all. Its principal aims are to preserve the native flora and to add to the knowledge of members and the public at large".

ENGLISH COTTAGE GARDENS, by Ethne Clarke and Clay Perry 1986 Viking Penguiin Inc., 40 West 23rd Street, New York 10010 10 x 7 3/4 in. hardback 160 pages $25.00.

Ethne Clark explains in her introduction, "This book is an excursion through the glories of England's summer gardens, from small cottage plots, where old-fashioned flowers live in clever harmony with vegetables and fruits, to the more spacious gardens of manor house and rectory, where collections of choice plants are carefully sited to reveal a gardener's personal vision of Eden".

The tour begins in early summer at gardens in Gloucestershire, Oxfordshire, Cornwall, Devonshire, Surrey and Hampshire. Midsummer finds the author and photographer in Norfolk, Dorset, Somerset and Suffolk. The tour ends late summer in the gardens of East Sussex, Surrey and Kent.

The introduction for each section provides background, observation or other noteworthy points. The photographs of the exquisite gardens were taken at dawn or sunset. The photographic notes would be helpful to anyone interested in photographing plants or gardens.

One is inspired to catch the next plane to England to tour the countryside. Short of that, the book inspires one to dream about or create one's own cottage garden at home.

HOW NOT TO KILL YOUR HOUSEPLANTS, The foolproof guide to lush, healthy plants by Ann Pregosin, owner of New York's Village Green Garden Shop. Color photographs by David Pregosin, Line Drawings by Mona Mark. 1986 Collier Books, a division of Macmillan Publishing Company, 866 Third Avenue, New York 10022. 5½ x 8¼ in. paperback 192 pages $8.95.

There is a lot of practical advice in this back-to-basics guide on growing healthy houseplants. Those who want to know why their plants complain so bitterly should pay attention to Ann Pregosin. Find out the "how not to's" for buying plants, overwatering, potting mixtures that dry out hard and/or are soggy wet, transplanting, feeding, insects, pruning and propagation.

The greatest strength of this book is its simplification. The science of growing healthy houseplants is reduced to around ten basic concepts. The book is witty, entertaining, and it makes one believe that anyone can grow healthy houseplants.

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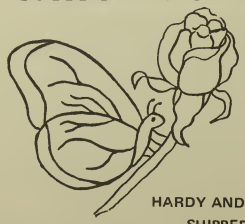

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A CULTURAL CALENDAR OF CARE FROM OUR AFFILIATES

Compiled by Penny Bunker

BEGONIAS Margaret Lee

Shift into the next size pot if needed.
Pot rooted cuttings and leaves.
Continue feeding.
Groom and inspect plants throughout growing season.
Spot spray individual plants at first sign of mildew.
Remove old flowers from tuberous type by snapping only the blossoms, not the stem.
Feed tuberous plants when the flower buds appear. Feed one tablespoon "Hi-Bloom" and one tablespoon of fish emulsion to one gallon of water.

BONSAI Dr. Herbert Markowitz

Water, WATER -- but check NOT to over-water. During these hot months it is best to water early in the day, but some bonsai may need two or three waterings on hot dry days.
Protect some plants by moving into a shaded area out of direct sun.
Check for insects and pests; spray with a diluted spray. (Be careful of elm trees - they usually do not need spraying).
Move some trees so they get only half day sun.
Wait until September or October to transplant bonsai.
Remove excess blossoms from trees to save their strength for next year. Also defoliate some of the deciduous varieties in July — NO later.

BROMELIADS Mary Siemers

Protect your plants from burning during the hot summer months by keeping them under lath, shadecloth, or any other material that will provide plenty of light, but not direct sun. Some hobbyists keep them under trees and find the results satisfactory. Few bromeliads can take direct sun.
Water — preferably in the evening or early morning. The frequency will be determined by the weather in your area. Fill the cup at each watering and let it overflow filling the leaf bases and media. Never allow the plant media to remain soggy.
Maintain humidity by wetting surrounding areas — humidity is important to the well-being and growth of bromeliads.
Continue fertilizing through the summer with water soluble fertilizer once a month — using ½ of recommended strength. Be sure to water plant thoroughly before fertilizing.

CACTI & SUCCULENTS Frank Thrombley

Root cuttings and/or pups; repot the plants that have not had their soil replenished for a number of years.
Continue your fertilizing schedule -- remember ½ strength is recommended.
Watch for drying winds or excessive heat that will dry your leaf bearing succulents. They require more water than normal.
Purchase the new plants you want, so you can repot them into your soil or compost and acclimate them to your conditions for the balance of the growing season.
Be sure the compost you use is of a texture that insures excellent drainage, for all of your cacti and succulents.
Share your knowledge with others while enjoying their plants and your own. Sharing is educational.

CAMELLIAS E.C. (Gene) Snooks

Apply the third and last application of high nitrogen fertilizer; only low nitrogen types hereafter, if any are used.
Prune unwanted new growth, especially interior branches and weak or stunted growth.
Start disbudding to provide better quality of blooms. Leave only one bloom bud at a tip and space 4-6 inches down branches.
Propagate by rooted cuttings and by air layering. Summer grafts can also be made at this time — use cleft or bark techniques.
Spray for mites, if needed. Watch for scale.
Maintain an adequate watering program to sustain growth and bloom bud formation. Never allow plants to dry out.
Arrange for responsible plant-sitting while on vacations.

DAHLIAS Abe Janzen

Continue regular watering program.
Tie canes to prevent plants breaking; use the loop for each canes.
Disbud to encourage better bloom.
Spray for insects and mildew; control slugs and snails.
Feed with a 5-10-10 fertilizer. Use potash alone to help promote root growth.
Keep old blossoms cut back to first set of leaves from the main stalk to prolong blooming.
Cut blossoms in late afternoon or early morning and place immediately in water.

EPIPHYLLUMS Frank Granatowski

Fertilize plants that have completed their blooming cycle with fish emulsion, slow release nitrogen fertilizer, or any good balanced fertilizer. DO NOT OVERFEED.

Remove spent blooms and unwanted apples, in order to conserve the plant's vitality.

Transplant to larger containers, plants that have outgrown their present container — move to the next size or a bit larger.

Plant new cuttings during the warm weather, to allow new growth to become established during the growing season.

Water hybrids during the hot summer months, and spray occasionally or mist. DO NOT allow soil to completely dry out.

Maintain plants in their proper environment, such as a lath house, under shade cloth, or suspend them under the branches of a tree. Avoid direct exposure to the summer sun.

FERNS Ray Sodomka

Maintain a good watering program.

Maintain humidity about the plants by dampening surrounding areas.

Fertilize plants regularly as they are in growing season. Use a high nitrogen fertilizer.

Keep dead fronds trimmed off.

Maintain regular pest control; spray for aphids, check for snails, slugs, spider mite, and scale. Use cygon as a drench for the mites.

Protect from hot sun.

Plant fern spore.

FUCHSIAS William Selby

Protect plants from extreme heat — remember hot winds dry plants in a short time. Mist or spray in the shade or in evenings as moisture on plants can result in burn spots.

Continue feeding regularly with high-phosphorous for more bloom.

Prune lightly after blooming to shape and encourage more blooms in the fall.

Keep seed pods (berries) picked off for more bloom.

Check nurseries for new varieties for next year.

GERANIUMS Carol Roller

Water thoroughly when plants become somewhat dry. Allow excess water to drain away.

Keep foliage as dry as possible.

Continue feeding a balanced fertilizer dissolved in water, using less than the recommended amount as often as needed to keep plants growing well.

Continue a pest control and disease prevention program using all products according to the manufacturer's directions.

Groom plants, removing discolored leaves and faded flowers. The long bloom stalks on regals and scenteds should be cut away with a sharp blade.

Take cuttings from zonals and ivy leaf types, if desired. Each cutting should have a healthy growing tip.

Protect tender plants from the sun if temperatures are high; move to a sheltered spot or create overhead shade.

Contine to rotate plants on a regular basis in order to keep them well-shaped.

GESNERIADS Michael Ludwig

Maintain a regular watering program, do not allow to dry out.

Protect from the hot sun — try to keep the temperature below 90 degrees in growing area.

Take proper action against invading pests.

Keep plants blooming by removing all spent blossoms.

IRIS San Diego-Imperial Counties Iris Society

Keep beds clean and free of old fans and weeds.

Revitalize planting areas by working humus into the soil.

Divide and replant tall-bearded iris, discarding the old spent rhizomes.

Dust ends of cut rhizomes with soil sulphur.

Cut off spuria foliage, but do not dig until September.

Feed those iris left in the ground with a high-nitrogen fertilizer this one time only.

Watch for aphids; use a light insecticide or a systemic.

ORCHIDS Charlie Fouquette

Continue watering cymbidiums heavily.

Feed a high-nitrogen fertilizer to cymbidiums, cattleyas, and nobile dendrobiums.

Spray and mist on hot dry days. Do not be fooled by low clouds; plants still need misting.

Keep paphs moist; repot after bloom.

Repot seedling phals and make cattleya divisions.

Plant dendrobium off-shoots when roots are 2 inches long, tag with plant name.

Watch for red spider or scale. Set out snail bait — use metaldehyde bait, malathion, or Orthene.

Check heat and light intensity in glasshouse.

Avoid sudden temperature changes where plants are in spike.

Keep outdoor or shade house planting medium moist.

ROSES

Continue feeding a well-balanced plant food every 3 to 4 weeks.

Treat with chelated iron those plants that have pale leaves with dark veins (chlorosis).

Continue regular watering, especially in hot dry spells.

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ALL AVAILABLE AT YOUR FAVORITE NURSERY!

Gently hose off bushes in the morning to remove accumulation of dust and spray residue.
Prune moderately in late August for abundant fall bloom.
Mulch with steer manure to conserve water.
Watch for rust and eradicate it; Remove infected foliage and spray with Acti-Dion PM or Funginex.

VEGETABLES
Prepare for fall planting by digging soil and mixing organic soil amendments.
Set plants of celery, eggplant, peppers, and tomatoes.
Plant seeds of snap beans, summer squash, corn, cucumber, carrots, beets, radish, turnip, and lettuce.
Harvest vegetables frequently while they are young and the quality is best. They are soon past this stage during warm months.
Irrigate deeply by furrows, flooding, or drip method.
Remove weeds while they are small and before they become competitive with the vegetables.

GREEN THUMB Penny Bunker
Plant and divide Shasta daisies.
Plant for fall bloom - calendulas, cornflowers, stock, snapdragons, zinnias.
Pinch back chrysanthemums once again.
Remove tops of narcissi after all foliage has died down.
Move belladonna lilies only after they have bloomed.
Watch for and control pests and disease — mildew, spider mites, thrips, whitefly. Blast with water or use chemical sprays or drenches.
Feed bird-of-paradise with cottonseed meal. Soil sulphur may also be applied to base of plants. Need excellent drainage and acid soil.
Prepare trench several weeks before planting sweet peas in August and September.

OTHER GARDEN CLUBS

AMERICAN GOURD SOCIETY
Sec: John Stevens (419) 946-3302
Box 274
Mount Gilead, OH 43338

AMERICAN HEMEROCALLIS SOCIETY
Selma Timmons
1306 Laura Ave.
Warner Robbins, GA 31088-0000

AMERICAN HOSTA SOCIETY
Pres: Olive Langdon (205) 324-7149
Evening phone: (205) 595-2885
5605 11th Avenue S.
Birmingham, AL 35222

AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS, SAN DIEGO CHAPTER
Pres: Mr. Frank Kawasaki 298-7271
3776 Fourth Avenue
San Diego, CA 92103

BONITA VALLEY GARDEN CLUB
Pres: Mrs. Arthur Barnett 475-0987
5758 Pray Street
Bonita, CA 92002

BRIDGE AND BAY GARDEN CLUB
Pres: Mrs. Thomas Stanley 435-9291
1229 Alameda Blvd.
Coronado, CA 92118

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Pres: Carol Graham 753-6757
1420 Ivyglen Drive
Encinitas, CA 92024

CALIFORNIA RARE FRUIT GROWERS SAN DIEGO CHAPTER
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4083 Albatross Street Apt. 2
San Diego, CA 92103

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2756 Highland Drive
Carlsbad, CA 92008

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Pres: Pat Hansen
Fullerton Arboretum
Fullerton, CA 92635

CHULA VISTA ROSE SOCIETY
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Chula Vista, CA 92011

CYCAD SOCIETY
Pres: David Mayo
1161 Phyllis Court
Mountain View, CA 94040

CYMBIDIUM SOCIETY OF AMERICA
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Westminster, CA 92683

EPIPHYLLUM SOCIETY OF AMERICA
Box 1395
Monrovia, CA 91016

HORTICULTURE HERITAGE COMMITTEE OF THE SAN DIEGO HISTORICAL SOCIETY
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11019 Fillbrook Drive
Lakeside, CA 92040

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Pres: Mrs. Vera Eimer 447-8029
1285 E. Washington Avenue
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NATIONAL OLEANDER SOCIETY
Pres: Mrs. Sherry Brahm (409) 684-0823
P.O. Box 3431
Galveston, TX 77552-0431

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Oceanside, CA 92056

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1563 Chestnut Street
Carlsbad, CA 92008

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Lawrence, Kansas 66044

PROFESSIONAL WOMEN'S HORTICULTURAL AND LANDSCAPING ASSOCIATION
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11642 Jarrito Court
San Diego, CA 92129

QUAIL BOTANICAL GARDEN FOUNDATION
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1101 San Leon Court
Solana Beach, CA 92075

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San Diego, CA 92128

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(617) 463-6737
37 Ox Bow Lane
Randolph, MA 02368

SOLANACEAE ENTHUSIASTS
Pres: John M. Riley
3370 Princeton Court
Santa Clara, CA 95051

SOLAR GARDEN CLUB
Pres: Mr. Glen Paape
6910 50th Street
San Diego, CA 92120

SOUTHERN CALIFORNIA CAMELLIA SOCIETY
Box 50525
Pasadena, CA 91105

PACIFIC BEACH GARDEN CLUB
Pres: Mrs. Henrietta Berthelsen 274-1434 Grand Ave.,
San Diego, CA 92109
2nd Mon. Sep. thru Jun., 1:00 p.m.
Pacific Beach Community Center

PALOMAR CACTUS AND SUCCULENT SOCIETY
Mr. Frank Lapick 753-2892
2602 La Gran Via
Carlsbad, CA 92008

PALOMAR DISTRICT CALIFORNIA GARDEN CLUBS, INC.
Dir. : Mrs. Alvin F. Putman 749-9587
15665 Fruitvale Road
Valley Center, CA 92082

PALOMAR ORCHID SOCIETY
Pres: Ted Pinger 436-2326
457 E. Glaucus
Leucadia, CA 92024
2nd Fri., Vista Senior Citizen Center
7:30 p.m.

POINT LOMA GARDEN CLUB
Pres: Kimberly Snedden 223-3806
4423 Alhambra Street
San Diego, CA 92107
2nd Wed., Westminister Presby. Church
Talbot & Canon, 10:00 a.m.

POWAY VALLEY GARDEN CLUB
Pres: Mrs. Matt Sokach
P.O. Box 381
Poway, CA 92064
2nd Wed., Hally's Garden Room
13519 Poway Rd., Poway, 9:00 a.m.

RANCHO SANTA FE GARDEN CLUB
Pres: LaVerne M. Schlosser 756-4529
P.O. Box 1807
Rancho Santa Fe, CA
2nd Tues., Rancho Santa Fe Garden Club
Avenida de Acadias, Rancho Santa Fe
7:30 p.m.

SAN CARLOS GARDEN CLUB
Pres: Mrs. Paul Hebert 463-7517
6450 Lake Shore Drive
San Diego, CA 92119
4th Tues., Home of members, 9:30 a.m.

SAN DIEGO ASSOCIATION OF PROFESSIONAL HORTICULTURISTS
Pres: Miss Cynthia Drake 271-8933
11121 Saunders Court
San Diego, CA 92131
4th Mon., Casa del Prado Rm. 104, 7:30 p.m.

SAN DIEGO BONSAI CLUB, INC.
Pres: Mr. Stan Childs 583-0562
5460 Baja Drive
San Diego, CA 92115
2nd Sun., Casa del Prado, 1:00 p.m.

SAN DIEGO BOTANICAL GARDEN FOUNDATION, INC.
Pres: Mr. Harry C. Haelsig 582-0536
4750 55th Street
San Diego, CA 92115

SAN DIEGO BROMELIAD SOCIETY
Pres: Mr. Jack Percival 222-7327
2711 Willow Street
San Diego, CA 92106
1st Thurs., Byzantine Catholic Church
2235 Galahad Rd., Serra Mesa, 7:45 p.m.

SAN DIEGO CACTUS & SUCCULENT SOCIETY
Pres: Dr. Leroy Phelps 280-9690
4094 36th Street
San Diego, CA 92104
2nd Sat., Casa del Prado, 1:30 p.m.

SAN DIEGO CAMELLIA SOCIETY
Pres: Mr. Palmer Groenwold 291-8912
1139 Madison Ave.
San Diego, CA 92116
3rd Wed., Casa del Prado, 7:30 p.m.

SAN DIEGO COUNTY BRANCH NATIONAL FUCHSIA SOCIETY
Pres: Janet Wright 722-3373
610 N. Nevada Street
Oceanside, CA 92054
2nd Thurs., Palmquist School
1999 California St., Oceanside 7:00 p.m.

SAN DIEGO COUNTY DAHLIA SOCIETY
Pres: Mr. Martin Walsh 277-5165
4077 Mt. Everest Blvd.
San Diego, CA 92111
4th Tues., Casa del Prado, 7:30 p.m.

SAN DIEGO COUNTY ORCHID SOCIETY
Pres: Mrs. Richard Bechtel 442-7180
10212 Vista de la Cruz
La Mesa, CA 92041
1st Tues., Casa del Prado, 7:30 p.m.

SAN DIEGO DAYTIME AFRICAN VIOLET SOCIETY
Pres: Mrs. Toni Baker 582-7516
6475 50th Street
San Diego, CA 92120
2nd Mon., Fellowship Hall, Christ United Methodist Church, 3295 Meade, 12 noon

SAN DIEGO EPIPHYLLUM SOCIETY
Pres: Mr. Ron Miller 746-9620
822 Via Rancho Parkway
Escondido, CA 92025
2nd Wed., Casa del Prado, 7:30 p.m.

SAN DIEGO FERN SOCIETY
Pres: Mr. Donald Callard 438-9409
7146 Argonauta Way
Carlsbad, CA 92008
3rd Thurs., Casa del Prado, 7:30 p.m.

SAN DIEGO FUCHSIA & SHADE PLANT SOCIETY
Pres: Mr. Ron Berkel 465-7649
1142 Osage Drive
Spring Valley, CA 92077
2nd Mon., Casa del Prado, 7:30 p.m.

SAN DIEGO GERANIUM SOCIETY
Pres: Mr. George Plaisted 583-9551
6356 Delbarton Street
San Diego, CA 92120
2nd Tues., Casa del Prado, 7:30 p.m.

SAN DIEGO GESNERIAD SOCIETY
Pres: Mr. Michael Ludwig 574-1138
642 Torrance Street
San Diego, CA 92103
1st Thurs., Casa del Prado, 7:30 p.m.

SAN DIEGO–IMPERIAL COUNTIES IRIS SOCIETY
Pres: Dorothy Driscoll
6338 Lake Athabaska Place
San Diego, CA 92119

SAN DIEGO ROSE SOCIETY
Pres: Ms. Patty Howell 436-3960
1045 Passiflora Ave.
Leucadia, CA 92024
3rd Mon., Casa del Prado, 7:30 p.m.

SAN DIEGUITO GARDEN CLUB
Pres: Mrs. Jan Netusil (Mary) 753-1044
912 Emma Drive
Cardiff, CA 92007
4th Wed., Ecke Family Bldg., Quail Gar.
Encinitas, 10 a.m.

SAN MIGUEL BRANCH AMERICAN BEGONIA SOCIETY
Pres: Mr. Michael Ludwig 574-1138
642 Torrance Street
San Diego, CA 92103
1st Wed., Casa del Prado, Rm. 104
7:30 p.m.

SOGETSU SCHOOL OF IKEBANA
Pres: Mrs. Leroy Lahey 423-1571
2829 Flax Drive
San Diego, CA 92154

SOUTHWEST GROUP, JUDGES COUNCIL
Chr. Mrs. Edwin R. Gould 475-8996
2111 Rachael Avenue
San Diego, CA 92139
1st Wed., Casa del Prado, 10:00 a.m.

SOUTHWEST HEMEROCALLIS SOCIETY
Pres: Mr. C.R. Bowman 273-7937
3927 Sequoia Street
San Diego, CA 92109
1st Sat., Feb., Apr., Jun., Sep., Nov.
10 a.m. Quail Gardens Meeting Room
Quail Gardens Rd., Encinitas

VILLAGE GARDEN CLUB OF LA JOLLA
Pres: Dorothy C. Carroll 578-1484
8304 Hydra Lane
San Diego, CA 92126
4th Thurs., La Jolla United Methodist
6063 La Jolla Blvd., La Jolla 1:00 p.m.

VISTA GARDEN CLUB
Pres: Rose Bradley 758-2435
1138 Anza Avenue, Vista, CA 92083
1st Fri. at 222 Jefferson St., Vista
Senior Service Center, 12 noon

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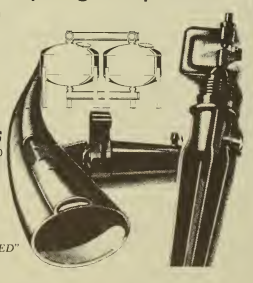

HORTICULTURE CALENDAR

continued from inside front cover

September 26-28
Palomar Orchid Society's Annual Fall Show at Plaza Camino Real, Carlsbad, CA. Fri: Show set-up and registration of exhibits 4-9 p.m.; Sat: Registration of exhibits 8-9:30 a.m.; Judging 10 a.m.; Sun. Exhibits and awards may be seen 11-4 p.m. Public is invited. Anyone may enter his orchid plants. Info: (619) 941-0382.

September 27-28
San Deigo Bonsai Fall Show, Casa del Prado, Room 101, Balboa Park, San Diego, CA. Sat. & Sun. 10-5 p.m. Free.

October 4-5
Balboa Park African Violet Fall Show, Casa del Prado, Room 101, Balboa Park, San Diego, CA. 10-4 p.m. Free.

October 17-21
Ikebana Fifth World Convention at Tokyo, Japan.

October 18-19
North County Rose Society's 20th Annual Rose Show, Plaza Camino Real, Carlsbad, CA. Sat. 1-6 p.m.; Sun. 12-4 p.m. Free. Cut rose entries from other rose societies are welcome.

November 19-23
43rd Annual National Chrysanthemum Society's Convention, Worthington Hotel, Sundance Square, Fort Worth, Texas. Show will be at Tarrant County Court House, Sundance Square, Ft. Worth, Texas. Public is cordially invited.

Deadline date for all Horticultural Events to be listed in September/October issue is July 21, 1986. Submit to CALIFORNIA GARDEN, San Diego Floral Association, Inc., Casa del Prado, Balboa Park, San Diego, CA 92101-1619.

NOW AVAILABLE

A Flora Of San Diego County, California

By R. Mitchel Beauchamp, M. Sc.

An up-to-date inventory of the native and adventive plants of this southwestern-most region of the Continental United States. The 241 page reference contains a sectored vegetation map of the county with discussion of plant communities and the rich floral diversity of the area. The 1841 native and 469 non-native plant taxa are listed with their known locations, flowering periods, elevational ranges and habitat regions within the county. Identification keys allow field use of the book.

Soft cover edition (Lexotone cover for long wear) $22.95
Hard cover edition $28.95
County Vegetation Map-unsectored (on durable Dupont TYVEK)
15" by 17½" rolled $3.25
folded flat $2.25

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MAGNOLIA SOULANGEANA

By Carol Greentree

One of the prettiest harbingers of spring, the saucer magnolia, **Magnolia soulangeana** presents a bare-branched display of 6-inch creamy flowers blushed with pink-lavender to deep rose. Sometimes mistakenly called tulip tree, because of the form, color and bloom time of its blossoms, it can become a large shrub or small tree. It is a hybrid of the Yulan, **M. heptapeta** and lily, **M. quinquepeta,** magnolias. Many named varieties are available. Beloved by Victorians as a showy specimen, it was named for the French horticulturist, Etienne Soulange-Bodin, who developed the cultivar in his garden.

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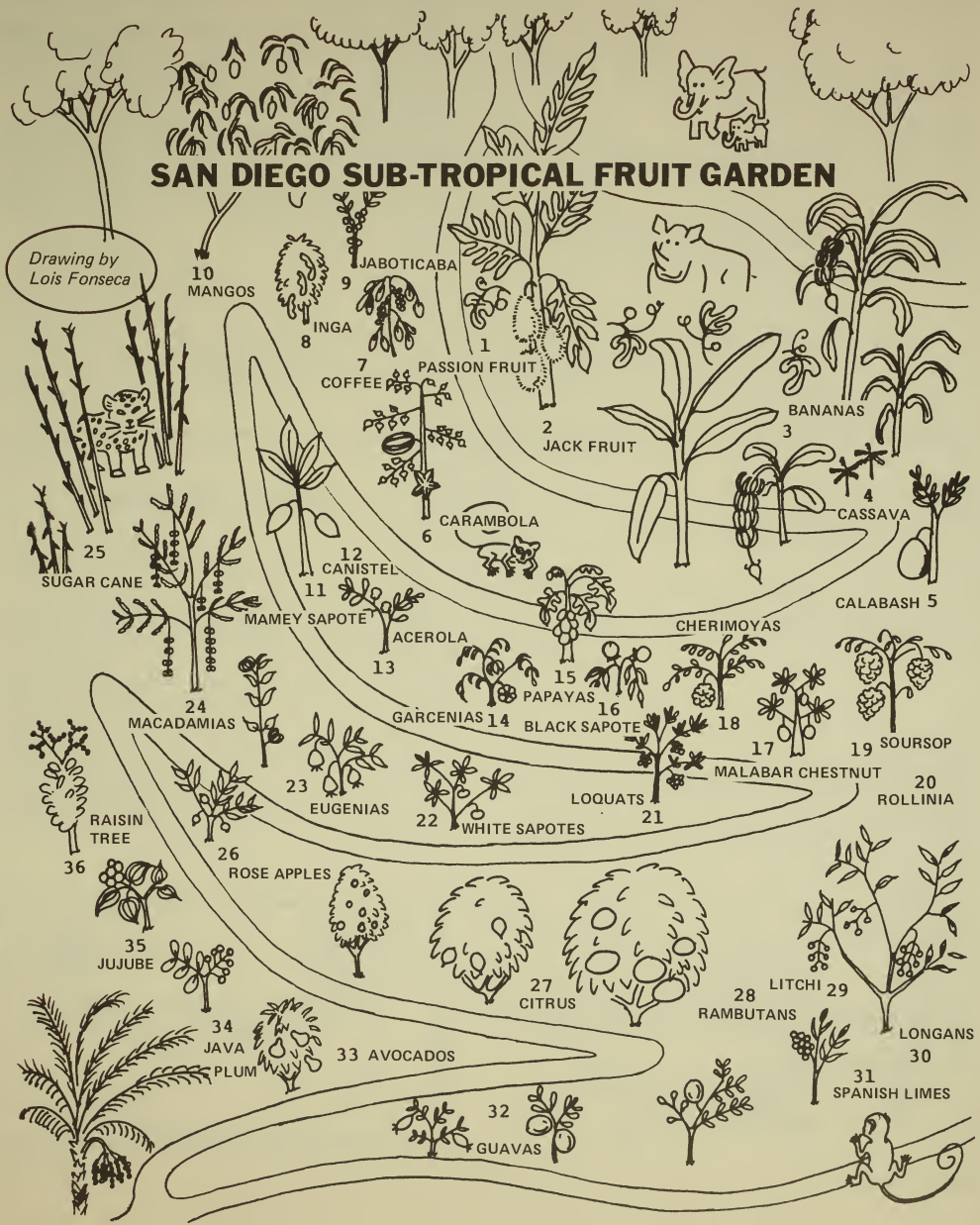
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